

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (cancelled)
2. (currently amended) A microfocus X-ray tube according to claim 4 21, wherein said focus has a diameter of the $\leq 10 \mu\text{m}$.
3. (currently amended) A microfocus X-ray tube according to claim 4 21, wherein said outer surface of said head is essentially rotationally symmetrical.
4. (original) A microfocus X-ray tube according to claim 3, wherein said outer surface of said head is essentially conical.
5. (canceled).
6. (canceled)
7. (canceled)
8. (original) A microfocus X-ray tube according to claim 4 21, wherein said outer surface of said head, in a direction of irradiation, is formed at least partially by a holder for said target.
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)
13. (canceled)
14. (canceled)
15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (new) A microfocus x-ray tube for inspecting an object, comprising:

a head that during operation of the x-ray tube faces an object that is to be inspected, wherein said head has an outer surface with a cross-section that tapers toward a free end of said head;

a target disposed on or in said head, wherein said target is a transmission target, wherein said outer surface of said head is formed at least partially by said target or by a collimator that in a direction of irradiation is disposed ahead of said target, wherein said target is hollow, and wherein said target terminates in a vertex; and

means for forming an electron beam adapted to bombard said target, wherein said means form said electron beam such that said x-ray tube has a focus with a diameter of $\leq 200 \mu\text{m}$.

22. (new) A microfocus X-ray tube according to claim 4, wherein said essentially conical outer surface of said head has an opening angle of less than 50° .

23. (new) A microfocus X-ray tube according to claim 4, wherein said head is provided with at least two regions, disposed one after the other in an axial direction, having different opening angles of the conical outer surface.